

REMARKS

Summary of the Office Action

The drawings stand objected to because Figure 10 should be designated by a legend such as --Prior Art--.

Claim 9 stands rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite.

Claims 1-2 and 5-7 stand rejected under 35 U.S.C. § 103(a) as being obvious over *Naoki et al.* (JP 02-022973) in view of Applicant's allegedly admitted prior art.

Claims 3 and 10 stand rejected under 35 U.S.C. § 103(a) as being obvious over *Naoki et al.* (JP 02-022973) in view of Applicant's allegedly admitted prior art and *Go* (USPN 4,912,545).

Claim 4 stands rejected under 35 U.S.C. § 103(a) as being obvious over *Naoki et al.* (JP 02-022973) in view of Applicant's allegedly admitted prior art, *Go* (USPN 4,912,545), and *Erhardt et al.* (USPN 5,070,380).

Claim 8 stands rejected under 35 U.S.C. § 103(a) as being obvious over *Naoki et al.* (JP 02-022973) in view of Applicant's allegedly admitted prior art and *Kazuo* (JP 10-256613).

Claim 9 stands rejected under 35 U.S.C. § 103(a) as being obvious over *Naoki et al.* (JP 02-022973) in view of Applicant's allegedly admitted prior art, *Kazuo* (JP 10-256613), and *Jack et al.* (USPN 5,808,350).

Summary of the Response to the Office Action

Applicant has amended claims 1 and 9, and has canceled claims 3-4 and 10 without prejudice or disclaimer. Accordingly, claims 1-2 and 5-9 are presently pending. A Replacement Drawing Sheet is being file concurrently herewith.

The Objection to the Drawings

The drawings stand objected to because Figure 10 should be designated by a legend such as --Prior Art--. In a Replacement Drawing Sheet filed concurrently herewith, Applicant has amended Figure 10 to include a legend of "Prior Art" in accordance with the comments of the Examiner. Accordingly, Applicant respectfully requests that the objection to the drawings be withdrawn.

The Rejection under 35 U.S.C. § 112, Second Paragraph

Claim 9 stands rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Applicant has amended claim 9 to improve readability. Accordingly, Applicant respectfully submits that the rejection under 35 U.S.C. § 112, second paragraph, is moot. Applicant respectfully submits that the issues with claim 9 do not rise to the level of indefiniteness and that this amendment does not narrow the intended scope of claim 9.

The Rejections under 35 U.S.C. § 103(a)

Claims 1-2 and 5-7 stand rejected under 35 U.S.C. § 103(a) as being obvious over *Naoki et al.* (JP 02-022973) in view of Applicant's allegedly admitted prior art. Claims 3 and 10 stand rejected under 35 U.S.C. § 103(a) as being obvious over *Naoki et al.* (JP 02-022973) in view of Applicant's allegedly admitted prior art and *Go* (USPN 4,912,545). Claim 4 stands rejected

under 35 U.S.C. § 103(a) as being obvious over *Naoki et al.* (JP 02-022973) in view of Applicant's allegedly admitted prior art, *Go* (USPN 4,912,545), and *Erhardt et al.* (USPN 5,070,380). Claim 8 stands rejected under 35 U.S.C. § 103(a) as being obvious over *Naoki et al.* (JP 02-022973) in view of Applicant's allegedly admitted prior art and *Kazuo* (JP 10-256613). Claim 9 stands rejected under 35 U.S.C. § 103(a) as being obvious over *Naoki et al.* (JP 02-022973) in view of Applicant's allegedly admitted prior art, *Kazuo* (JP 10-256613), and *Jack et al.* (USPN 5,808,350). Applicant traverses the rejections for at least the following reasons.

(i) Discussion of Applied Art

JP 02-22973-A (*Yuya*): This reference discloses an image pick-up device having two solid-state imaging elements that have their photo sensitive surfaces facing each other. However, *Yuya* does not disclose a shift-resistor formed on one of the solid-state imaging element.

USPN 4,912,545 (*Go*): *Go* merely discloses the use of bumps. However, Applicant respectfully submits that there is no reason to adapt the bumps to *Yuya*.

USPN 5,070,380 (*Erhardt et al.*): *Erhardt et al.* merely discloses the use of a shift register.

USPN. 5,808,329 (*Jack et al.*): *Jack et al.* discloses a silicon layer with a shift register formed on a compound semiconductor substrate. However, Applicant respectfully asserts that the structure of this device is incompatible with the use of a bump because one of the semiconductor materials forms a layer, and therefore, there would be no motivation to apply the teachings of this reference to a device having bumps.

Applicant's allegedly admitted prior art (Fig. 10 of specification): This disclosure teaches two semiconductor image pickup elements.

(ii) Arguments

As such, there is no reference showing two semiconductor image pick-up elements using different materials fastened via three or more bumps. *Go* merely shows the use of bumps, and *Erhardt et al.* merely discloses the use of a shift resister. Therefore, Applicant respectfully asserts there is no motivation to combine all of the references to achieve a combination having all the elements, as presently claimed.

Even if all the cited references were combined, the invention recited in claim 1, as amended, cannot be achieved from a combination of the applied references because none of the reference discloses a first back-illuminated semiconductor image pickup element has a wider energy band gap material which is etched and has a shift resister.

Accordingly, as set forth above, Applicant respectfully asserts that the rejections under 35 U.S.C. § 103(a) should be withdrawn because the applied art, whether taken singly or combined, does not teach or suggest each feature of independent claim 1, as amended. Further, Applicant respectfully asserts that dependent claims 2 and 5-9 are allowable at least because of their respective dependence from independent claim 1, as amended, and the reasons set forth above.

Conclusion

In view of the foregoing, Applicant respectfully requests reconsideration and the timely allowance of the now pending claims. Should the Examiner feel that there are any issues

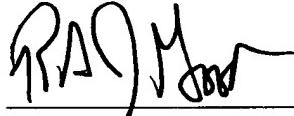
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outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative at 202-739-5549 to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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By:

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